

polluted streams wherein he was seeking breeding stock he found plenty of living Unionidae, but a large percentage of the gravid females thereof were heavily infested with bacteria and infusoria. A result was that “. . . most of the gloecidia were either destroyed leaving only the empty shells in the marsupia or were reduced to an enfeebled condition. . . .” It is reasonable to believe that the two species of *Goniobasis* of Alabama were undergoing a similar restraint on propagation.

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THE SNAILS OF TED CAVE, TENNESSEE

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Ted Cave is situated on the west bank of Caney Fork River, about five miles east of Smithville, DeKalb Co., Tennessee. It is an ugly cave, without any of the formations which make many so attractive. The floor is littered with slabs of rock fallen from the roof, and over these is deposited a layer of slippery mud acquired when the river rose and flooded the cave. It has nothing to attract the tourist, but to the couchologist and evolutionist it is of great interest.

The mouth of the cave is a large opening on the bluff about twenty-five feet above the river. On the right hand side, a short distance within, is an opening in the floor through which a stream may be seen about twenty feet below. This is Fall Creek, which

enters the cave through a sink-hole, flows for about a quarter mile underground, and emerges on the bank of the river about forty yards down stream. The stream cannot be reached here without a ladder, but farther back the cave forks; a short distance along the right fork and down a steep, clay bank there is a small opening in the right wall through which the stream may be reached.

The winding channel through which the stream flows is about ten feet wide and just high enough for a man to stand erect, if he is not too tall. The stream has a good current, and is from six inches to a foot or more deep and from six to eight feet in width. The bottom is composed of smooth, well-packed gravel or sand, with an occasional large rock dropped from the roof. Because the stream flows for several miles above ground before it enters the cave its temperature fluctuates with the seasons, quite warm in the summer, cold in the winter.

In the riffles the stream-bed is dotted with small snails with light brown shells, smooth or with weak spiral striae, about 4 mm. in diameter and would be about 6 mm. in height if the spires were not eroded away. These have been determined by Mr. Calvin Goodrich as a form of *Lithasia obovata* (Say). In the quieter water, among the leaves and sticks washed in by floods, another and larger snail, *Goniobasis edgariana* Lea, is found. This species has a plicate-striate shell about 5 mm. in diameter and 15 mm. in length (allowing for the eroded spire).

Both of these snails represent intermediate stages in adaptation to a subterranean life. *Goniobasis edgariana* has been modified the least. The colors of the animal appear brighter, due apparently to a reduction of the black pigment. The eyes are black and probably functional. The most marked difference is in the reduced size of the shell, being less than one-half the size of epigeal specimens. Like the above species, *Lithasia obovata* has been greatly reduced in size. The animal is white or blue-white with a pink band across the snout and pink tentacles. The pigment has been reduced about 85 per cent. The eyes are pink rather than black and are probably non-functional.

As far as the author was able to ascertain neither species occurs in Fall Creek above the sink or where the stream emerges on the bank of Caney Fork River. Both, however, are inhabitants of the Caney Fork tributaries elsewhere.